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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,857	09/25/2003	Gopal Dommety	CISCP345	1271

22434 7590 06/28/2007  
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EXAMINER
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CHEA, PHILIP J

ART UNIT	PAPER NUMBER
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2153

MAIL DATE	DELIVERY MODE
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06/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/672,857

Applicant(s)

DOMMETY ET AL.

Examiner

Philip J. Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/25/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

Claims 1-16 have been examined.

#### *Drawings*

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figures are difficult to read. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al. (US 2004/0098588), herein referred to as Ohba.

As per claims 1,14-16, Ohba discloses a method for performing layer 2 authentication of a Mobile Node supporting Mobile IP, as claimed, comprising:

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obtaining layer 2 information including at least one of a MAC address and username associated with the Mobile Node (see paragraph 36, where a user device may connect through 802.11 and authentication may be accomplished at layer 2 and a MAC address is implicit of layer 2, also see end of paragraph 37, where username/password can be used for authentication);

generating an orphaned host object including the layer 2 information (see paragraph 36, where the MCS server may maintain the credentials of the user used to authenticate the user);

unorphaning the orphaned host object, thereby enabling layer 3 policies to be enforced (see paragraph 39, where a TLS session identifier from layer 2 authentication may be used for layer 3 authentication).

Although the system disclosed by Ohba shows substantial features of the claimed invention (discussed above), it fails to disclose that the unorphaning occurs when an IP address associated with the layer 2 information is received such that the unorphaned host object includes the IP address and layer 2 information.

However, Ohba does show that if layer 3 authentication is performed after layer 2 authentication, session information may be shared by authentication in different layers (see paragraph 39). At the time of the invention, a person having ordinary skill in the would have found it obvious that layer 3 is the IP layer and when session information is shared between layer 2 and layer 3 by authentication (i.e. private keys), the IP address will be associated with the layer 2 information, in order to verify that the appropriate device is being authenticated.

As per claim 2, Ohba further discloses obtaining a username associated with the Mobile Node; wherein the orphaned host object includes the username associated with the mobile node (see paragraph 37).

As per claim 3, Ohba further discloses receiving the layer 2 information in an access request packet;

wherein generating the orphaned host object is performed when an access accept packet is received indicating the Mobile Node associated with the layer 2 information has been authenticated by a AAA server (see paragraph 36).

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As per claim 4, Ohba further renders obvious that unorphanning the orphaned host object comprises:

receiving a packet including the IP address and the layer 2 information; and updating the orphaned host object to include the IP address, thereby generating an unorphanned host object (see discussion above regarding obvious MAC and IP address association when authenticating layer 3 policies).

As per claim 5, Ohba does not expressly disclose receiving an ACCT start packet. However, Ohba does show that session information is shared by authentication and that the AAA server uses the RADIUS protocol. At the time of the invention, a person having ordinary skill in the art would have found it obvious to use ACCT start packets when enabling layer 3 policies after associating an IP address with layer 2 information in order to keep track of authentication, authorization and accounting.

As per claim 6, Ohba further renders obvious receiving an ACCT stop packet including the IP address; and

deleting the unorphanned host object when the ACCT stop packet is received (see paragraph 49). Considering that it would be obvious to use an ACCT start packet to keep track of authentication, authorization and accounting, it would also be obvious to a person having ordinary skill in the art at the time of the invention to issue an ACCT stop packet in order to prevent someone else from maliciously using session information.

As per claim 7, Ohba further discloses deleting the unorphanned host (see paragraph 49).

As per claim 8, Ohba further renders obvious receiving an ACCT stop packet including the IP address;

wherein deleting the unorphanned host object is performed when the ACCT stop packet is received (see rejection of claim 6).

As per claim 9, Ohba further discloses an IP address of a network device from which the packet was received, the method further comprising:

maintaining a mapping between the IP address of the network device and the IP address of the Mobile Node such that a mapping of one or more Mobile Nodes supported by the network device is

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maintained (see paragraph 36, where a mapping of the IP address of the network device (MCS server) and the IP address of the Mobile Node is implied by using the RADIUS protocol).

As per claim 10, Ohba further renders obvious that the packet including the IP address and the layer 2 information is an ACCT start packet (see paragraph 36, where it is obvious that an ACCT start packet is used because the RADIUS protocol is used).

As per claim 11, Ohba further renders obvious receiving a packet including the IP address of the network device that indicates that the network device is not functioning (see paragraph 49, where it is obvious that an identifier like an IP address would be used to indicate which device has the error); and

deleting the unorphaned host object or orphaning a host object for each of the Mobile Nodes supported by the network device (see discussion of claim 6).

As per claim 12, Ohba further renders obvious that the packet including the IP address of the network device that indicates that the network device is not functioning is an ACCT-OFF packet. Considering that the RADIUS protocol may be used, it would have been obvious to a person having ordinary skill in the art that an ACCT-OFF packet is used to indicate a device is shutdown or in this case not functioning so is shutting down.

As per claim 13, Ohba further renders obvious that the IP address of the network device that indicates that the network device is not functioning is an ACCT-ON packet. Considering that the RADIUS protocol is used and the device is not functioning, it would have been obvious to a person having ordinary skill in the art that when the device is not functioning a reboot would try and correct the problem and then the device would send out an ACCT-ON packet in order to inform the RADIUS protocol it is ready to accept incoming connections.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Chea whose telephone number is 571-272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Philip J Chea  
Examiner  
Art Unit 2153

PJC 5/15/07

  
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